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MARSHALL, GERSTEIN & BORUN LLP
6300 SEARS TOWER
233 S. WACKER DRIVE
CHICAGO, IL 60606

EXAMINER

AILES, BENJAMIN A

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/934,036		KEYES ET AL.	
	Examiner		Art Unit	
	Benjamin A Ailes		2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☒ Claim(s) 11 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-39 have been examined.

Claim Objections

2. Claims 11 and 29 are objected to because of the following informalities: "...plant emissions report using a using a format defined..." should read "...plant emissions report using a format defined...". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1, line 11, the phrase, "...store a portion..." is deemed vague and indefinite. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 1-10,14-18, 20-23, 35, 38, and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Agrusa et al. (U.S. 2004/0024891), hereinafter referred to as Agrusa.

7. Regarding claims 1 and 20, Agrusa discloses a data processing system for use with a process control system, the data processing system comprising:

- A first processing plant communicatively coupled to an open network (para. 0005 – para. 0006, lines 1-3);
- A second processing plant communicatively coupled to the open network (para. 0005 – para. 0006, lines 1-3);
- A primary server communicatively coupled to the open network, wherein the primary server is adapted to execute a data processing application (para. 0048, specifically lines 2-3); and
- A primary data historian communicatively coupled to the primary server, wherein the primary server is adapted to receive process control information from the first and second processing plants via the open network and to store a portion of the received process control information in the primary data historian and wherein the primary server is further adapted to use the data processing application to generate analysis results and send the analysis results to the first and second plants via the open network (see para. 0044).

8. Regarding claim 2, in accordance with claim 1, Agrusa discloses the system further comprising a redundant server that is communicatively coupled to the primary server and the primary data historian, wherein the redundant server is adapted to

maintain synchronization with the primary server and to supersede the primary server in response to one of a failure indication and degradation indication associated with the primary server (para. 0006, lines 11-16).

9. Regarding claim 3, in accordance with claim 2, Agrusa discloses the system further comprising a redundant data historian that is communicatively coupled to the primary server, the redundant server and the primary data historian, wherein the redundant data historian is adapted to maintain data synchronization with the primary data historian and to supersede the primary data historian in response to one of a failure indication and degradation indication of the primary data historian (para. 0006, lines 11-16).

10. Regarding claim 4, in accordance with claim 1, Agrusa discloses the system wherein the open network is the Internet (para. 0003, lines 1-6).

11. Regarding claim 5, in accordance with claim 1, Agrusa discloses the system wherein the first process plant is in a first geographic location and the second process plant is in a second geographic location different from the first geographic location (para. 0043, lines 25-33 and 41-55, and para. 0048, lines 14-26).

12. Regarding claim 6, in accordance with claim 1, Agrusa discloses the system wherein the first process plant is associated with a first business entity and the second process plant is associated with a second business entity (para. 0043, lines 25-33 and 41-55).

13. Regarding claim 7, in accordance with claim 1, Agrusa discloses the system wherein the data processing application is adapted to perform one of a plant

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optimization function, a real-time process monitoring function, a data reconciliation function, a plant emissions analysis function, a plant emissions control function, a dispatch function, a plant control function and an alarming function (see para. 0047).

14. Regarding claim 8, in accordance with claim 1, Agrusa discloses the system wherein the data processing application is adapted to perform a data correction function (see para. 0062).

15. Regarding claim 9, in accordance with claim 8, Agrusa discloses the system wherein the data correction function is one of a digital verification function, a data validation function, a data reconciliation function and a data source re-calibration function (see para. 0063).

16. Regarding claim 10, in accordance with claim 1, Agrusa discloses the system wherein the data processing application uses continuous emissions monitoring data to generate a plant emissions report (see para. 0047).

17. Regarding claim 14, in accordance with claim 1, Agrusa discloses the system wherein the data processing application uses an Internet browser application as a visualization layer (see para. 0041).

18. Regarding claim 15, in accordance with claim 14, Agrusa discloses the system wherein the Internet browser application is executed within a user interface that is physically remote from the first and second process plants (see para. 0041).

19. Regarding claims 16 and 22, in accordance with claims 1 and 22, respectively, Agrusa discloses the system wherein one of the first and second process plants further

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comprises one of an internet-enabled field device, an internet-enabled field device interface and a data concentration node (see para. 0005 – 0006, lines 1-3).

20. Regarding claims 17 and 23, in accordance with claims 16 and 22, respectively, Agrusa discloses the system wherein the one of the internet-enabled field device, an internet-enabled field device interface and a data concentration node includes an embedded data server and an embedded data historian communicatively coupled to the embedded data server (see para. 0005 – 0006, lines 1-3, and para. 0044).

21. Regarding claim 18, in accordance with claim 1, Agrusa discloses the system wherein one of the first and second plants includes a digital communication network based on one of an RS485, Foundation Fieldbus, Ethernet TCP/IP and a wireless blue tooth protocol (para. 0003, lines 1-6).

22. Regarding claim 21, in accordance with claim 20, Agrusa discloses the system wherein the data processing application includes one of a data analysis tool, a remote process management tool, a process optimization tool, a continuous emissions monitoring and minimization tool, a distributed power management tool, a dispatch and optimization tool, a centralized multi-client HVAC system monitoring and maintenance management tool, a remote water and waste processing facility monitoring and control tool, a pharmaceutical process tool, a biotechnology process tool and a semiconductor process tool (see para. 0005).

23. Regarding claim 35, Agrusa discloses a data processing system for use with a process control system, the data processing system comprising:

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- A processing plant communicatively coupled to an open network (para. 0005 – para. 0006, lines 1-3);
- A remote user interface communicatively coupled to the open network (see para. 0041);
- A server communicatively coupled to the open network, wherein the server is adapted to execute a data processing application (para. 0048, specifically lines 2-3);
- A data historian communicatively coupled to the server, wherein the server is adapted to receive process control information from the processing plant via the open network and to store a portion of the received process control information in the data historian and wherein the server is further adapted to use the data processing application to generate analysis results and send the analysis results to the remote user interface via the open network (see para. 0044).

24. Regarding claim 38, in accordance with claim 35, Agrusa discloses the system further comprising a second processing plant communicatively coupled to the open network that sends process control information associated with the second processing plant to the server via the open network (para. 0005 – para. 0006, lines 1-3).

25. Regarding claim 39, in accordance with claim 35, Agrusa discloses the system further comprising a redundant server communicatively coupled to the server, wherein the redundant server is adapted to maintain synchronization with the server and to supersede the server in response to one of a failure indication and degradation indication associated with the server (para. 0006, lines 11-16).

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26. Claims 24-27 and 30-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Eryurek et al (U.S. 6,795,798), hereinafter referred to as Eryurek.

27. Regarding claim 24, Eryurek discloses a method of acquiring, analyzing and reporting process plant data, comprising the steps of:

- Receiving information from a plurality of process plants associated with a plurality of business entities via an internet (col. 5, lines 3-10);
- Processing the received information using a cluster of redundant servers associated with a vendor business entity that is different from the plurality of business entities to generate analysis results (col. 9, lines 1-6);
- Storing the analysis results in a plurality of redundant data historians that are communicatively coupled to the cluster of redundant servers (col. 8, lines 59-67);
- Providing access to the analysis via the internet (Fig. 32, col. 38, lines 60-67, and col. 35, lines 33-42); and
- Billing each of the plurality of business entities based on one of respective data usage and type and processing time (see Fig. 34 and col. 38, lines 27-39).

28. Regarding claim 25, in accordance with claim 24, Eryurek discloses the method wherein the step of receiving the information from the plurality of process plants includes the step of receiving a first part of the information from a first process plant in a first geographic location and a second part of the information from a second process plant is in a second geographic location that is physically remote from the first geographic location, wherein the first process plant is associated with a first one of the

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plurality of business entities and the second process plant is associated with a second one of the plurality of business entities (col. 5, lines 3-10).

29. Regarding claim 26, in accordance with claim 24, Eryurek discloses the method wherein the step of processing the received information includes the step of performing one of a plant optimization function, a real-time process monitoring function, a data reconciliation function, a plant emissions analysis function, a plant emissions control function, a dispatch function, a plant control function and an alarming function (col. 7, lines 41-52).

30. Regarding claim 27, in accordance with claim 24, Eryurek discloses the method wherein the step of processing the received information using the cluster of redundant servers associated with the vendor business entity that is different from the plurality of business entities to generate the analysis results includes the step of performing a data correction function (col. 13, lines 11-25, specifically lines 24 and 25).

31. Regarding claim 30, in accordance with claim 24, Eryurek discloses the method wherein the step of processing the received information using the cluster of redundant servers associated with the vendor business entity that is different from the plurality of business entities to generate the analysis results includes the step of performing one of a plant emissions minimization and optimization using one of a shared vector gradient technique, a neural net technique and a Fibonacci search technique (col. 7, lines 20-24).

32. Regarding claim 31, in accordance with claim 24, Eryurek discloses the method further comprising the step of sending a first part of the received information from one of

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the plurality of process plants to the cluster of redundant servers using one of an internet-enabled field device, an internet-enabled field device interface and a data concentration node (col. 8, lines 45-49).

33. Regarding claim 32, in accordance with claim 31, Eryurek discloses the method wherein the step of sending the first part of the information from the one of the plurality of process plants to the cluster of redundant servers using the one of an internet-enabled field device, an internet-enabled field device interface and a data concentration node includes the step of using an embedded data server to send the first part of the information (col. 8, lines 45-49).

34. Regarding claim 33, in accordance with claim 24, Eryurek discloses the method wherein the step of billing each of the plurality of business entities includes the step of billing each of the plurality of business entities in accordance with one of a rental agreement, an off-book operating lease agreement and a financial lease agreement for respective costs that are less than the costs associated with the costs that would otherwise be incurred by each of the plurality of processing plants to generate the analysis results (see Fig. 34, col. 40, lines 57-58, and col. 38, lines 27-39).

35. Regarding claim 34, in accordance with claim 24, Eryurek discloses the method wherein the analysis results include cost accounting information for each of the plurality of processing plants (col. 8, lines 32-40).

Claim Rejections - 35 USC § 103

36. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

37. Claims 11-13, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrusa in view of Keeler et al. (U.S. 5,386,373), hereinafter referred to as Keeler.

38. Regarding claim 11, Agrusa disclosed the data processing application according to claim 10 above, but is silent on the generation of a report using a format defined by a governmental authority and also communicating said report to the governmental authority. However, in related art, in this case a continuous emission monitoring system, Keeler discloses to ensure that public needs are met, industries must be willing to be regulated by governmental authorities (see Keeler, col. 1, lines 16-25). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to incorporate a governmental authority into the data processing application method in order to follow the regulations put into place by governmental authorities and ensure that public needs and opinions are met successfully (see Keeler, col. 1, lines 18-20). It is for this reason that one of ordinary skill in the art would have been motivated to make this combination.

39. Regarding claim 12, Agrusa disclosed the data processing application according to claim 1 above, but is silent on the use of plant emissions minimization and plant emissions optimization. However, in the related art of continuous emission monitoring, Keeler discloses multiple methods of achieving plant emissions minimization and optimization. By way of example, Keeler discloses a neural net technique used for

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minimization and optimization (see Keeler, col. 6, lines 8-55). It would have been obvious to one of ordinary skill in the art at the time the application was made to combine the plant emissions minimization and optimization as disclosed by Keeler with the data processing application disclosed by Agrusa. One would have been motivated to make this combination in order to create a control system for emissions minimization and optimization (see Keeler, col. 7, lines 13-22, and 26-36).

40. Regarding claim 13, Agrusa disclosed the data processing application according to claim 1 above, but is silent on the use of a compensatory control function. However, in the related art of continuous emission monitoring, Keeler discloses a method for achieving compensatory control. Keeler discloses a control function used for implementing a compensatory control function in order to optimize the inputs to the actual plant (see Keeler, col. 7, lines 12-46). It would have been obvious to one of ordinary skill in the art at the time the application was made to combine the plant emissions compensatory control function as disclosed by Keeler with the data processing application disclosed by Agrusa. One would have been motivated to make this combination in order to create a control system for emissions compensatory control (see Keeler, col. 7, lines 18-22).

41. Regarding claim 36, in accordance with claim 35, Agrusa disclose the use of a remote user interface (0041), but are silent on the interface being associated with a regulatory authority. However, in related art, in this case a continuous emission monitoring system, Keeler discloses to ensure that public needs are met, industries must be willing to be regulated by governmental authorities (see Keeler, col. 1, lines 16-

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25). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to incorporate a governmental authority into the data processing application method in order to follow the regulations put into place by governmental authorities, in this example using governmental authority approved software, and ensure that public needs and opinions are met successfully (see Keeler, col. 1, lines 18-20). It is for this reason that one of ordinary skill in the art would have been motivated to make this combination.

42. Regarding claim 37, in accordance with claim 36, Keeler teaches the need for a regulatory authority and by way of example uses the Environmental Protection Agency (EPA). One of ordinary skill in the art would have been motivated to associate with the EPA because the EPA is well known in the art as an existing regulatory body in the government that sets up rules and regulations that industries must abide by (see Keeler, col. 1, lines 16-30, specifically lines 20-23).

43. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Agrusa in view of Funkhouser (U.S. 5,784,570), hereinafter referred to as Funkhouser.

44. Regarding claim 19, Agrusa disclosed the need to send information between a client and a server (see Agrusa, para. 0014) but failed to disclose the use of a data compression technique. However, in related art, Funkhouser teaches the use of a data compressor that compresses the data before the data is transmitted from a server to a client (see Funkhouser, col. 2, lines 33-37). It would have been obvious to one of ordinary skill in the art at the time the application was made to utilize the data compression technique taught by Funkhouser with the client-server transmission

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method disclosed by Agrusa. One of ordinary skill in the art would have been motivated to make the combination in order to implement the client/server data transmission using data compression in order to allow for more effective bandwidth use and use less local memory (see Funkhouser, col. 2, lines 40-46).

45. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eryurek in view of Keeler.

46. Regarding claim 28, Eryurek discloses the step of processing the received information and generating analysis results, but fails to disclose the step of completing continuous emissions monitoring data to generate a plant emissions report. However, in related art, Keeler teaches a method of continuous emissions monitoring for a plant in order to generate reports (see Abstract and col. 2, lines 5-27, specifically lines 6-9). It would have been obvious to one of ordinary skill in the art at the time the application was made to combine the continuous emissions monitoring and results method disclosed by Keeler with the process control and analysis method disclosed by Eryurek. One of ordinary skill in the art would have been motivated to make such a combination in order to fully take advantage of the maintenance and monitoring functionalities disclosed by Eryurek which are deemed compatible with a multiple amount of device monitoring and communication applications (see Eryurek, col. 7, lines 25-40).

47. Regarding claim 29, Eryurek disclosed the data processing application, but is silent on the generation of a report using a format defined by a governmental authority and also communicating said report to the governmental authority. However, in related art, in this case a continuous emission monitoring system, Keeler discloses to ensure

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that public needs are met, industries must be willing to be regulated by governmental authorities (see Keeler, col. 1, lines 16-25). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to incorporate a governmental authority into the data processing application method in order to follow the regulations put into place by governmental authorities and ensure that public needs and opinions are met successfully (see Keeler, col. 1, lines 18-20). It is for this reason that one of ordinary skill in the art would have been motivated to make this combination.

Conclusion

48. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Eryurek et al. (U.S. 6,813,532) disclose a creation and display of indices within a process plant.

Schleiss et al. (U.S. 6,633,782) disclose a diagnostic expert in a process control system.

Havekost et al. (U.S. 6,774,786) disclose an integrated alarm display in a process control network.

Bartone et al. (U.S. 6,633,823) disclose a system and method for monitoring and controlling energy usage.

Brown et al. (U.S. 6,285,966) disclose a function block apparatus for viewing data in a process control system.

Hochart (U.S. 5,823,423) discloses a method and device for digitally processing measurements obtained from one more sensors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes, whose telephone number is (571)272-3899. The examiner can normally be reached on Monday-Friday (7:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached at (571)272-3896. The fax phone number for the organization where this application or proceeding is assigned is (703)872-3906.

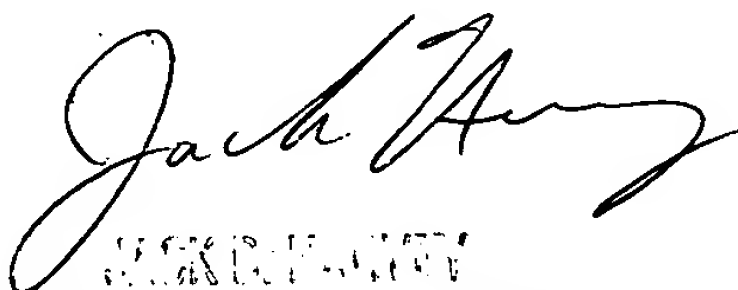
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [benjamin.ailes@uspto.gov].

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All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Benjamin Ailes
Patent Examiner
Art Unit 2142



JACK AILES
SUPERVISOR OF EXAMINERS